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EXAMINER

QIN, YIXING

ART UNIT

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2625

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 09/925,734 | Applicant(s) OKUNISHI ET AL. | |
| | Examiner Yixing Qin | Art Unit 2625 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 12-14, 16-18, 20, 21, 23, 24 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 12-14, 16-18, 20, 21, 23, 24 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Response to Amendment***

In response to applicant's amendment received 9/11/07, all requested changes have been entered.

Response to Arguments

Applicant's arguments filed 9/11/07 have been fully considered. They are directed towards newly added limitations. The AAPA in the applicant's specification discloses one type of destination information (shipment information) that can be stored on a process cartridge. P[0004] discloses that the destination data is read and then printing is performed according to whether the shipment information is correct and the process cartridge can then proceed to control the printing operation. It, however, does not disclose that the type of information stored is predetermined print settings. A new reference, Bullock (U.S. Patent No. 6,019,449), is used to show various settings in a process cartridge and how they can be updated. Please see the rejection below for more details. This action is made Final.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which

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said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

I. Claims 1-5, 12-14, 24 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirst et al (U.S. Patent No. 5,930,553) and in view of the Applicant's background and further in view of Bullock et al (U.S. Patent No. 6,019,449).

Regarding claims 1 and 12, Hirst discloses a process cartridge detachably attached to a main body of an image forming device, the process cartridge comprising:

- a component for carrying out image formation (column 1, line 50); and
- a nonvolatile memory for storing (column 2, lines 32-37)

It does not explicitly disclose "first destination information comprising a shipment destination, to be used to control a printing operation by a control system of the main body of the image forming device, wherein the shipment destination is configured to identify a predetermined set of printing parameters stored in the control system and

second destination information, comprising a destination code, not to be used to control the printing operation by the control system of the main body of the image forming device;

process control information to be used to further control the printing operation by altering or replacing at least one of the predetermined printing parameters."

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The applicant's background discloses in P[0005] and P[0006] that process cartridges are known to have shipment destinations P[0006] (i.e. first destination information) discloses how the shipment destination data is accepted (or not accepted) by a printer, meaning that it can control the functionality of the printer

However, Hirst et al discloses in Fig. 2, lines 61-66 that ID/Model numbers and manufacturing date (19a – i.e. second destination information) can be stored with information regarding features of the system, meaning that the memory on the process cartridge can store more than one type of data. While Hirst et al does not go into detail, item 19a is just a form of identification and would be obvious not to affect the control of printing.

In addition, the tertiary reference, Bullock discloses in column 4, lines 23-47 various data that is factory or printer written to the process cartridge. The factory written data would be considered predetermined print parameters, such as supply, color coefficients, ink colorimetry, etc, which would be factors to consider when printing occurs.

Furthermore, column 5, lines 1-10 discloses that the memories can be periodically replaced to provide updated parameters to customers who already have installed printers. This is essentially the ability to update the controls of the printer without having to go through a lot of trouble.

All references are combinable because both are in the art of process cartridges.

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Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have a process cartridge with the above information and have the ability to change or update the information.

The motivation would have been to have a cartridge that could work in multiple locations and with different parameters.

Therefore, it would have been obvious to all references to obtain the invention as specified.

Regarding claim 2, Hirst discloses wherein the second destination information is stored at an address at which a lot number of the process cartridge is to be stored.”

(Fig. 2 and column 3, lines 60-62 that Fig. 2 is “...one possible consumable memory segmentation scheme...” Hirst et al defines “consumables” in column 1, line 17 as “...toner, ink, ribbon, photoconductor, developer, etc... One can see from item 19a, that there is various data to identify the cartridge.)

Regarding claim 3, Hirst et al discloses wherein the second destination information is in a format to be displayed on a prescribed display unit by the control system of the main body of the image forming device. (column 1, lines 21-24 that “...near the end of the consumable’s life, the print engine displays a message to the user on the front panel of the device or a host device...” One would understand that this front panel could be the operational unit as mentioned

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by Miyamoto et al and that a variety of information could be displayed – it is just a matter of design to display information from the memory instead of just a message. It is also well-known that operation units can have a display - such as a small LCD)

Regarding claim 4, Hirst et al additionally discloses wherein the second destination information is stored in the nonvolatile memory in an order displayed on the display unit. (Fig. 2 and column 5, lines 25-36)

Regarding claim 5, Hirst discloses “wherein the second destination information constitutes part of a lot number of the process cartridge.” (Fig. 2, item 19a)

Regarding claims 13 and 14, Hirst

It does not explicitly disclose “wherein the lot number shows that the process cartridge is a value pack/recycled product.”

However, the applicant discloses in the submitted prior art in page 2, lines 13-19 of the specification the comparison of a standard and a value pack. Also, since recycled products are well known, it would be obvious to one of ordinary skill in the art at the time of the invention to include information that a cartridge contains recycled parts

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Therefore, it would be obvious to include in the lot number that a cartridge is a value pack in the memory information of the combined invention of the first three references.

The motivation would be to help identify items that are the same, but come in different packaging and quantities.

Therefore, it would have been obvious to combine all the references to obtain the invention as specified.

Regarding claims 24 and 26, the tertiary reference, Bullock discloses wherein the process control information is stored in a first unused address of the nonvolatile memory, and comprises a printing parameter indicating a color tone of a toner. (column 4, line 28 – ink colorimetry is one of the stored parameters. Again, which address to store the information would have been a obvious choice depending on the needs of the user in designing the cartridge.)

II. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirst et al (U.S. Patent No. 5,930,553) in view of the Applicant's Background in view of Bullock et al (U.S. Patent No. 6,019,449) and further in view of Official Notice.

Regarding claims 6 and 7, Hirst and the Applicant's Background discloses the storage of destination information in a process cartridge.

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It does not explicitly disclose if they are represented in ASCII or hexadecimal in memory.

However, the Examiner takes Official Notice that ASCII and hexadecimal are known notations of data representation in memory.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to use either or both representations.

The motivation would have been to use common notations for the sake of compatibility.

Therefore, it would have been obvious to use known notations to obtain the invention as specified.

II. Claims 16-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirst et al (U.S. Patent No. 5,930,553) in view of the Applicant's background in view of Bullock et al (U.S. Patent No. 6,019,449) and further in view of Ueno (U.S. Patent No. 6,144,812).

Regarding claims 16 and 17, Hirst, Applicant's background and Bullock discloses various information that can be stored in the memory of a process cartridge.

It does not explicitly disclose any information regarding reference voltages.

However, Ueno discloses in Fig. 2, item 23 that there is a default primary high-voltage bias setting value.

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All reference are in the art of image processing and using memory for the storage of data in regards to an image formation section.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have memory that contains voltage information.

The motivation is to enable a user or a machine to easily identify whether a cartridge is the one fitted for a particular printer.

Therefore, it would have been obvious to combine all the references to obtain the invention as specified.

Regarding claims 18 and 20, the information in item 21 of Fig. 2 of the tertiary reference Ueno such as identification codes and maker code can suggest that a version number would be an obvious item to include since most code have some sort of version identification when they are released for use. This means that, for example, the maker code or the date, could obviously be based upon the version number. Ueno further discloses in column 2, line 67 and column 3, lines 1-3 that areas 21 and 23 are written when the cartridge is made at the factory and/or delivered. Area 26 is written every image formation, meaning that the information in this area that is being used does not depend on the version of the cartridge since it can be written after the version of the cartridge has been set (which would be in area 21 at the factory

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V. Claims 21 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirst et al (U.S. Patent No. 5,930,553) and in view of the Applicant's background in view of Bullock et al (U.S. Patent No. 6,019,449) and further in view of Applegate et al (U.S. Patent No. 5,995,774).

Regarding claims 21 and 23, Hirst discloses a variety of consumables in a printer. (column 1, lines 15-55)

It does not explicitly disclose "wherein the image forming device comprises a photoreceptor drum, a charger, an exposing device, a developing device, a cleaner and a toner reservoir as components configured to execute image formation, and the process cartridge includes only the toner reservoir."

However, Applegate et al discloses in the first few sentences of the abstract a detachable cartridge containing a toner reservoir.

All references are combinable because they are all in the art of using process cartridges in a printing device.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to have used a process cartridge with a toner reservoir in Miyamoto's invention.

The motivation would have been to enable toner to be easily changed by swapping out the cartridge.

Therefore, it would have been obvious to combine all the references to obtain the invention as specified.

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Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yixing Qin whose telephone number is (571)272-7381. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Moore can be reached on (571) 272-7437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

YQ

//David Moore//
SPE AU 2625